ESMO SUMMIT MIDDLE EAST 2018
Management of Prostate Cancer in the Middle East

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Dr Deborah Mukherji

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EPIDEMIOLOGY OF PROSTATE CANCER IN THE MIDDLE EAST
Estimated Cancer Incidence Worldwide in 2012: Men

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Data source: GLOBOCAN 2012
Map production: IARC
World Health Organization

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GLOBOCAN 2012, International Agency for Research on Cancer
### The Five commonest cancers in the GCCC Countries 1998-2012: Male GCCC Nationals

<table>
<thead>
<tr>
<th>Site</th>
<th>Bahrain</th>
<th>ASR</th>
<th>Kuwait</th>
<th>ASR</th>
<th>Oman</th>
<th>ASR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung</td>
<td>511</td>
<td>27.5</td>
<td>Colorectal</td>
<td>597</td>
<td>17.6</td>
<td>693</td>
</tr>
<tr>
<td>Colorectal</td>
<td>359</td>
<td>18</td>
<td>NHL</td>
<td>501</td>
<td>11.3</td>
<td>638</td>
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<tr>
<td>Prostate</td>
<td>270</td>
<td>14.7</td>
<td>Prostate</td>
<td>487</td>
<td>16.8</td>
<td>632</td>
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<tr>
<td>Bladder</td>
<td>261</td>
<td>8.2</td>
<td>Bladder</td>
<td>453</td>
<td>14.7</td>
<td>613</td>
</tr>
<tr>
<td>Leukaemia</td>
<td>209</td>
<td>8.2</td>
<td>Leukaemia</td>
<td>424</td>
<td>7.6</td>
<td>505</td>
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</table>

<table>
<thead>
<tr>
<th>Site</th>
<th>Qatar</th>
<th>ASR</th>
<th>KSA</th>
<th>ASR</th>
<th>UAE</th>
<th>ASR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung</td>
<td>139</td>
<td>19.4</td>
<td>Colorectal</td>
<td>6181</td>
<td>9.0</td>
<td>Colorectal</td>
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<tr>
<td>Colorectal</td>
<td>132</td>
<td>8.5</td>
<td>NHL</td>
<td>5292</td>
<td>6.5</td>
<td>Lung</td>
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<tr>
<td>Prostate</td>
<td>107</td>
<td>15.4</td>
<td>Leukemia</td>
<td>4807</td>
<td>4.7</td>
<td>Prostate</td>
</tr>
<tr>
<td>NHL</td>
<td>93</td>
<td>10.3</td>
<td>Liver</td>
<td>4735</td>
<td>7.4</td>
<td>Leukaemia</td>
</tr>
<tr>
<td>Liver</td>
<td>86</td>
<td>12</td>
<td>Lung</td>
<td>3886</td>
<td>6.1</td>
<td>NHL</td>
</tr>
</tbody>
</table>

Alothman, Lancet Oncology 2015
Incidence of Prostate Cancer in the Middle East region
Globocan 2008-2012

- Yemen: 2.5 (2008), 0.2 (2012)
- Tunisia: 0.7 (2008), 0.7 (2012)
- Sudan: 8 (2008), 2.3 (2012)
- Qatar: 0.8 (2008), 0.8 (2012)
- Egypt: 7 (2008), 0.8 (2012)
- Algeria: 7 (2008), 1.8 (2012)

GLOBOCAN 2012, International Agency for Research on Cancer
Prostate cancer incidence compared to the West

PROSTATE CANCER IN THE ARAB WORLD: A VIEW FROM THE INSIDE

- Review - explore differences in epidemiology and risk factors between the Middle Eastern Arab countries and some of the developed countries in Europe and North America.
- Age-standardized incidence rate in the Arab countries is still lower than that in the Western countries
  - Is steadily increasing with time
- Several factors to explain this difference: health care systems related factors such as

  - Lack of good population-based registries
  - Relatively young age structure
  - Lower reported androgen and PSA levels in Arab men
  - Effect of genetic differences on prostate cancer risk
  - Metabolic syndrome paradox
  - Protective effect of the Mediterranean diet on a subset of the Arab population

June 2015 Clinical Genitourinary Cancer 13(6). Lara Hilal Mohammed Shahait Deborah Mukherji
A total of 294 Arab patients were referred between 2009 and 2014.

- Median age: 63 years (range 44-81).
- Emirati nationals: 63 (21%) vs. Various countries MEA & North Africa.
- Median PSA: 8.9 ng/ml [3.4-784]
  - PSA of less than or equal 10 ng/ml: 61 (50%)
  - Abnormal digital Exam: 54/294 (18%)

All patients underwent a 14 core prostate biopsy.

- 123 (42%) patients were found to have prostate cancer on biopsy.

Gleason

- Score 6: 62 (51%) vs. Score 7 or >: (49%) vs. Score of 8 or >: 30 (24%)

M1: 21 (17%)
STAGE AT DIAGNOSIS: DATA FROM LEBANON

- Review of prostate cancer cases presenting to AUBMC from January 2010 to July 2015
- 580 cases of prostate cancer were identified.
- At diagnosis, median age was 68 (range 43-97);
- 25.2% (130) presented with stage 4 disease at diagnosis.
- 12% of this cohort was from Iraq with 57.6% presenting with stage 4 disease.

- D.Mukherji et al JCO Supplement Feb 2017 e552
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- D.Mukherji et al JCO Feb 2017e552

- 28.4% (165) patients met criteria for Stampede trial,
- 10.2% (59) for CHAARTED, and 4.8% (28) for Latitude
GUIDELINES AND MULTI-DISCIPLINARY MANAGEMENT
HOW USEFUL ARE INTERNATIONAL TREATMENT GUIDELINES IN LOW- AND MIDDLE-INCOME COUNTRIES?

• How do middle eastern Oncologists rely on international guidelines?

• A study of Kerr - Online survey of oncologic practice with respect to the treatment of lung and breast cancer in LMICs

• Of the 139 respondents
  • 58% always use guidelines (often different ones for different diseases) to support their clinical decisions.
  • The guidelines used vary, with some referring to more than one set of guidelines.
    • 92% use NCCN guidelines
    • 55% ASCO guidelines
    • 55% ESMO guidelines
    • 40% national guidelines

Stewart Kerr, Abdul-Rahman Jazieh, and David Kerr, Journal of Global Oncology, 2018
HOW USEFUL ARE INTERNATIONAL TREATMENT GUIDELINES IN LOW- AND MIDDLE-INCOME COUNTRIES?

• Of the respondents who use national guidelines, their stated reason for not relying on the international guidelines is that the treatments specified in international guidelines are not easily accessible within their countries.

• 75% of respondents who use international guidelines modify them in some way to treat their patients, which contrasts with only 50% who rarely have to modify national guidelines.
ADAPTATION OF NCCN GUIDELINES TO THE MIDDLE EAST AND AFRICA REGION

Figure 1: Unique visitors to NCCN.org from the Middle East and North Africa region, 2008–2013.
"We'll just mill around till he's asleep, and and then send him back up. This operation is actually for a placebo effect."
FIRST ST. GALLEN APCCC CONFERENCE MIDDLE EAST SATELLITE MEETING

• 2017 AUBMC, first APCCC meeting/co-chaired by Drs. R Khaulil & Dr. D Mukherji.
• Topics: access to specialized imaging, surgery and novel therapeutics in the region, challenges to the implementation of multi-disciplinary management of prostate cancer.

• Purpose of the Q & A: to elicit consensus recommendations specific to the Middle East.
• A manuscript containing the regionally-focused consensus recommendations is in preparation for publication in a medical journal.
3.5 Do you recommend Docetaxel in addition to ADT in patients with metastatic castration-sensitive/naive disease relapsing after prior treatment for localized prostate cancer and with high volume disease as per CHAARTED (visceral metastases and/or ≥4 bone lesions with ≥1 beyond vertebral bodies and pelvis)?

1 - Yes, in the majority of patients
2 - In a minority of selected patients
3 - No
4 - Abstain
5 - Unqualified to answer
WHAT ABOUT MULTI-DISCIPLINARY APPROACH

- Opportunity for healthcare professionals to discuss in depth with oncology experts cancer optimal care
- Focuses on the daily challenges that oncology practitioners face in providing cancer therapy.
- Condensed, high-standard educational interactive program,
- Intention - continuously attract and engage oncology experts to commit to update knowledge and practices in this fast-evolving field to the benefit of cancer patients as ultimate goal.
Revealing a cancer diagnosis to patients: attitudes of patients, families, friends, nurses, and physicians in Lebanon—results of a cross-sectional study

F. Farhat MD,* A. Othman MD,† G. el Baba MD,‡ and J. Kattan MD*†

Conclusions: The social background in Lebanese society is the main obstacle to revealing the truth to cancer patients. Lebanese patients seem to prefer direct communication of the truth, but families take the opposite approach. Physicians also prefer to communicate the reality of the disease at the time of diagnosis, but in actuality, they instead disclose it progressively during treatment. Faith is helpful for acceptance of the diagnosis, and families play a key role in the support of the patients. An open discussion involving all members of society is necessary to attain a better understanding of this issue and to promote timely disclosure of a cancer diagnosis.
PATIENTS EDUCATIONAL CAMPAIGN
Campagne de Sensibilisation Sur le Cancer De la Prostate - CASPRO

CASPRO

• Annual Prostate Cancer Awareness Campaign
• initiated by the Hematology-Oncology and Urology departments at Hôtel-Dieu de France Hospital
• Encourage men at risk to screen for the disease
• The campaign also aims to educate men on prostate cancer and its treatment options for all stages of the disease.
• A FREE Consultation and PSA testing
MIDDLE EAST AND WESTERN COUNTRIES IS IT THE SAME DISEASE?

• SPECIFIC CHALLENGES
• Result - inability to provide complex personalized treatment regimens and Fup care, as necessary
• Many aspects:
  ✓ Organizational
  ✓ Financial
  ✓ Education & Awareness
  ✓ Networking
COUNTRIES

per capita GNI < US$1,036

<table>
<thead>
<tr>
<th>Countries (N = 48)</th>
<th>Cancer health services and infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Afghanistan</td>
<td>Poorly developed healthcare infrastructure</td>
</tr>
<tr>
<td>2. Bangladesh</td>
<td>• overextended services far exceeding capacity,</td>
</tr>
<tr>
<td>3. Cambodia</td>
<td>• limited human resources,</td>
</tr>
<tr>
<td>4. Democratic Republic of Korea</td>
<td>• poorly supported by government financial resources.</td>
</tr>
<tr>
<td>5. Kyrgyzstan Republic</td>
<td></td>
</tr>
<tr>
<td>6. Myanmar</td>
<td></td>
</tr>
<tr>
<td>7. Nepal</td>
<td></td>
</tr>
<tr>
<td>8. Tajikistan</td>
<td></td>
</tr>
</tbody>
</table>

Healthcare financing is mostly by catastrophic out-of-pocket expenditure. The level of development and planned annual vertical investments by governments in infrastructure and in terms of financial and human resources fall far short of the level to ensure equitable access to:
• Preventive, diagnostic, treatment and follow-up care for the general population.
More than 3/4 of patients with cancer do not receive adequate care, with poor survival prospects.
Some countries such as Bangladesh are working towards universal health coverage.

## LOWER-MIDDLE-INCOME COUNTRIES
(per capita GNI US$1,036 to US$4,085)

<table>
<thead>
<tr>
<th>Countries (N = 48)</th>
<th>Cancer health services and infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Syria</td>
<td>Cancer health systems</td>
</tr>
<tr>
<td>2. Yemen</td>
<td>• Fragmented</td>
</tr>
<tr>
<td>3. West Bank &amp; Gaza</td>
<td>• Mostly centered in urban areas,</td>
</tr>
<tr>
<td>4. Armenia,</td>
<td>• Underinvestment in equipment essential</td>
</tr>
<tr>
<td>5. Bhutan,</td>
<td>consumables and drugs &amp; human resources</td>
</tr>
<tr>
<td>6. India,</td>
<td>development</td>
</tr>
<tr>
<td>7. Indonesia,</td>
<td>Vast regional variation of services within</td>
</tr>
<tr>
<td>8. Laos,</td>
<td>countries exists</td>
</tr>
<tr>
<td>9. Mongolia,</td>
<td>• Extremely limited availability of and</td>
</tr>
<tr>
<td>10. Pakistan,</td>
<td>access to care for rural and socioeconomically</td>
</tr>
<tr>
<td>11. Philippines,</td>
<td>disadvantaged populations.</td>
</tr>
<tr>
<td>12. Sri Lanka,</td>
<td>Some countries are working towards</td>
</tr>
<tr>
<td>13. Timor-Leste,</td>
<td>universal health coverage</td>
</tr>
<tr>
<td>14. Uzbekistan,</td>
<td>• India, Indonesia, Philippines, Sri</td>
</tr>
<tr>
<td>15. Vietnam,</td>
<td>Lanka and Vietnam</td>
</tr>
</tbody>
</table>

**Cancer health services in Asia by per capita gross national income (2012) categories. World Bank (http://www.worldbank.org/)/ Sankaranarayanan et al.**

### Countries (N = 48)

| 1. Iran |  
| 2. Iraq |  
| 3. Jordan |  
| 4. Lebanon |  
| 5. Turkey |  
| 6. Azerbaijan |  
| 7. China |  
| 8. Georgia |  
| 9. Kazakhstan, |  
| 10. Malaysia, |  
| 11. Maldives, |  
| 12. Thailand, |  
| 13. Turkmenistan |  

### Cancer health services and infrastructure

- **Cancer health systems are still evolving with less integrated multiple independent systems of care**
- **Considerable potential for further improvements in**
  - infrastructure, coverage, and healthcare financing
  
  - Some countries such as Thailand, Malaysia and Turkey have much better facilities:
    - systems developed with universal health coverage
    - providing seamless access for prevention,
    - early detection
    - satisfactory clinical management of common cancers
    - improved survival outcomes.

- **Rural areas have inadequate services in large countries such as China**
### HIGH-INCOME COUNTRIES/REGIONS
(per capita GNI > US$12,616)

<table>
<thead>
<tr>
<th>Countries (N = 48)</th>
<th>Cancer health services and infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bahrain</td>
<td>High government investment</td>
</tr>
<tr>
<td>2. Kuwait</td>
<td>• well organized healthcare infrastructure,</td>
</tr>
<tr>
<td>3. Oman</td>
<td>• well resourced and highly accessible diagnostic and treatment services,</td>
</tr>
<tr>
<td>4. Qatar</td>
<td>• facilities for early detection,</td>
</tr>
<tr>
<td>5. Saudi Arabia</td>
<td>• advanced state-of-the-art diagnostic and treatment services within public health services,</td>
</tr>
<tr>
<td>6. United Arab Emirates</td>
<td>• expatriates contribute to a high proportion of human resources (healthcare providers) in West Asian high-income countries.</td>
</tr>
<tr>
<td>7. Brunei Darussalam,</td>
<td></td>
</tr>
<tr>
<td>8. Hong Kong SAR of China,</td>
<td></td>
</tr>
<tr>
<td>9. Israel,</td>
<td></td>
</tr>
<tr>
<td>10. Japan,</td>
<td></td>
</tr>
<tr>
<td>11. Republic of Korea,</td>
<td></td>
</tr>
<tr>
<td>12. Macao SAR of China,</td>
<td></td>
</tr>
<tr>
<td>13. Singapore,</td>
<td></td>
</tr>
<tr>
<td>14. Taiwan</td>
<td></td>
</tr>
</tbody>
</table>

ORGANIZATIONAL PROBLEMS

- Inadequate health systems infrastructure distribution
- Absence of a global primary prevention program
- Non adequate distribution of diagnostic technologies
- Centralizing of specialized centers as radiotherapy, and others (mostly available in major cities)
FINANCIAL PROBLEMS

- High cost of cancer diagnostic & treatment
- Inadequate distribution of resources between different insurers
- Problems of Reimbursement of drugs by some insurers, (high cost drugs) - time & percentage of reimbursement
- Absence of national guidelines for reimbursement
- Lack of fund raising from NGO’s
- Inadequate distribution of reimbursement burden
- High burden of cancer treatment
  - Accounting for 53% of the total cost of treatment for incurable diseases
EDUCATION & AWARENESS

• Absence of a CME accreditation requirements by the MOH/Lebanese order of physicians
• Lack of awareness activities for public in many disease areas (skin, cervix, colon, etc…)
• Lack of active prevention campaign as antismoking campaign, prevention for obesity problems, anti-pollution etc…

“You have to learn about thousands of diseases, but I only have to focus on fixing what’s wrong with ME! Now which one of us do you think is the expert?”
NETWORKING

- Absence of a Cancer Medical Filing system
  - Unable to track the patient file when patient move among doctors
  - Increase the cost of treatment and compromise the quality of medical services
- Low networking among institutions
- Lacking of networking between stakeholders
  - Absence of national guidelines
    - MOH guidelines are not followed by other insurers
  - Need for a better update on the national cancer registry
MANAGEMENT OF PROSTATE CANCER IN THE MIDDLE EAST

• High proportion of patients diagnosed with de-novo metastatic disease
• While the average age of this region remains young, prostate cancer will likely become a significant cause of morbidity/mortality as the population ages.
• The Aim of the treatment is to provide the best quality of care for the patients
  • International Guidelines may not be applicable in some counties due to financial issues.
  • Some of international guidelines users modify them in some way to treat their patients (resource stratification)
• Public awareness and multi-disciplinary management should be encouraged to improve outcomes in the region
THANK YOU

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